

### **REMARKS**

Reexamination and reconsideration of this application is requested. After this response without amendment, Claims 1-37 remain pending in this application. Applicants submit that the present response places the application in condition for allowance or, at least presents the application in better form for appeal. Entry of the present response is therefore respectfully requested.

### **Claim Rejections - 35 USC § 112**

The Examiner rejected Claims 1-32 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Office Action states that the claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. More specifically, the Office Action stated that the amended language added to Claims 1, 11, 21, and 32 in the previous Amendment dated February 15, 2005 of "...first portion of information to be delivered to the first networked device as an ordinary unicast packet...second portion of information to be delivered to the second networked device as an ordinary unicast packet..." is not disclosed in either the original specification or claims. The Applicants respectfully traverse this rejection.

Applicants respectfully believe that the above assertions in the Office Action are misplaced for the following reasons. The Specification as originally filed on page 1 under the section entitled "Cross-Reference To Related Applications" states that the teachings of the following U.S. Patents and Patent Applications are incorporated by reference: Application No. 09/240,546, entitled "Reliable Multicast For Small Groups" filed on January 29, 1999 and now issued as U.S. Patent No. 6,415,312; U.S. Patent Application No. 09/240,549, entitled "Multicast Support For Small Groups", filed on January 29, 1999 and now issued as U.S. Patent No. 6,502,140; U.S. Patent Application No. 09/329,101, entitled "System For Multicast Communications In Packet Switched Networks", filed on June 9, 1999 and now issued as U.S.

Patent No. 6,625,773; and U.S. Patent Application No. 09/774,505, entitled "Method And System For Efficiently Delivering Content To Multiple Requesters", filed on January 31, 2001.

The above referenced patents and patent applications and the Specification as originally filed clearly teach "a first portion of information to be delivered to the first networked device as an ordinary unicast packet" and "a second portion of information to be delivered to the second networked device as an ordinary unicast packet", as recited for independent Claims 1, 11, 21, and 32. For example, the Specification as originally filed states on page 18, lines 5-8 "[a] request (for a portion of content) from a first destination...a request (for a portion of content) from a second destination." Page 18, lines 13-4 also states that "[a]s requests for portions of content are received..." Page 10, lines 2-5 states that the destination "is identified by an IP address 508, and further identified by a TCP port 510". In other words, the packets will be received at the destinations via TCP. Because TCP packets are unicast packets, one of ordinary skill in the art will understand that the packets will be received at the destination as an ordinary unicast packet.

Additionally, on page 19, lines 6-7 states that "a requested portion of content" is transmitted to "the members of each bucket". Page 19, lines 7-11 also state that the portion of content is sent only once while attaching the addressing information and associated system information for each destination requesting the same portion of content. This is so each destination can receive its own copy of an ordinary unicast (TCP) packet. The above citations of the Specification as originally filed clearly show "a first portion of information to be delivered to the first networked device as an ordinary unicast packet" and "a second portion of information to be delivered to the second networked device as an ordinary unicast packet". For example, a portion of information is requested; the requested portion is then transmitted and is received as an ordinary unicast packet.

However, going even further, on Page 23, lines 16-21 of the Specification as originally filed states that "[t]he response preferably is sent out using a multicast technique such as comprising the Small Group Multicast (SGM) protocol such as described in U.S. Patent

Application No. 09/240,549, entitled "Multicast Support For Small Groups", filed on January 29, 199, which is commonly owned and the entire teachings of which are hereby incorporated by reference." When SGM is used the destinations receive packets as ordinary unicast packets. For example, see U.S. Patent Application No. 09/240,549 now issued as U.S. Patent No. 6,502,140 at col. 3, lines 47-48 ("the nodes in the list are 4-byte IPv4 unicast addresses"). Also, page 28, lines 6-21 and FIG. 4 of the Specification as originally filed states communication via HTTP, which inherently includes TCP and therefore unicast packets.

Additionally, U.S. Patent Application No. 09/329,101 now issued as U.S. Patent No. 6,625,773 explicitly states in col. 4, lines 49-53 that "the packets sent to R8 and R9 could be "small group multicast" packets with a single address in the destination list or they could be ordinary unicast packets addressed to C & D respectively". Col. 4, lines 55-60 even states an advantage of using an ordinary unicast for the last hop.

Furthermore, the claims as originally filed do support the language in question. For example, original Claims 1, 11, 21, and 32 recited "requested a portion of the content" and Claims 5, 15, 25, 31, and 37 recite "Small Group Multicast" and as stated above, is a multicast protocol where the destinations receive packets as ordinary unicast packets.

Therefore, the Specification as originally filed does support "a first portion of information to be delivered to the first networked device as an ordinary unicast packet" and "a second portion of information to be delivered to the second networked device as an ordinary unicast packet" as recited for independent Claims 1, 11, 21, and 32. Accordingly, in view of the discussion above, Applicants believe that the rejection of Claims 1-32 under U.S.C. § 112, first paragraph, has been overcome and respectfully request that this rejection be withdrawn.

### **Claim Rejections - 35 USC § 103**

The Examiner rejected Claims 1-37 under 35 U.S.C. 103(a) as being unpatentable over Diwan U.S. Patent No. 6,801,936. The Statute expressly requires that obviousness or non-

obviousness be determined for the claimed subject matter "as a whole," and the key to proper determination of the differences between the prior art and the present invention is giving full recognition to the invention "as a whole." The Diwan reference simply does not teach, anticipate, or suggest, the patentably distinct limitations of:

a first request corresponding to the first networked device, the first request requesting a first portion of the content to be delivered to the first networked device as an ordinary unicast packet, and

a second request corresponding to the second networked device, the second request requesting a second portion of content to be delivered to the second networked device as an ordinary unicast packet, the second portion of content requested including an overlapping portion of content that overlaps the first portion of content requested by the first request; and

a program memory for storing computer program instructions for the controller, the computer instructions including instructions for

collecting the first request and second request into a bucket, and  
creating a combined response, the combined response destined for reception by the first networked device and by the second networked device, the combined response including the overlapping portion of content requested by the first and second networked devices, wherein the combined response comprises a multicast packet.

The limitations taken "as a whole" in independent Claim 32 and similarly independent Claims 1, 11, and 21 are not present in Diwan.

The Office Action concludes that Diwan teaches a first and second request requesting portions of information to be delivered to the networked devices, but does not specifically state that the first client and the second client make requests for contents to be delivered via unicast packets. However, The Office Action goes on to state the following: it is implicit in Diwan that the requested services include contents delivered via broadcast and unicast. The user may make

specific requests for content delivery (using a unicast HTTP request). The agent (server) can retrieve content directly from the information servers instead of passively listening for multicast data (col. 6, lines 40-43). The Office Action states that this implies that the information server sends the requested content directly to the agent (e.g., delivered via unicast packets). Hence, the Office Action states, the reference inherently has content that is to be delivered via unicast packets.

As already argued on pages 13 and 14 of the previous Response With Amendment dated February 15, 2005, Diwan teaches that subscribers register with an agent so that the subscribers can receive their requested information. See Diwan col. 3, lines 47-49. The agent receives the information from the information providers and **bundles the relevant information to be sent out to the appropriate subscribers**. A multicast message is then generated by the agent and contains the common information and is transmitted to the group of subscribers. More specifically, **the subscribers receive multicast information from the agent**. See Diwan col. 6, lines 16-25.

The Office Action directs the Applicants to col. 6, lines 40-43 of Diwan, where Diwan teaches that the agent can actively get the desired information by accessing web sites, for example, of the information providers. The Office Action is concluding that this is the same as what is taught in the independent Claims 1, 11, 21, and 32. However, this is incorrect and the Applicants respectfully assert that the Examiner is dissecting the claims and not considering them as a whole, as required by the Statute. Claims 1, 11, 21, and 32, all similarly recite that a first and second networked device request a first and second portion of content respectively to be delivered to the requesting device as an ordinary unicast packet. Also, independent Claims 1, 11, 21, and 32, further recite that a combined response is created that includes the overlapping portion of content requested by the first and second networked devices and is destined for reception by the first networked device and by the second networked device. The combined response comprises a multicast packet. In other words, the networked devices are requesting information to be delivered to the networked devices via unicast packets. The present invention

utilizes a novel multicast packet that includes the requested content, which will be received by the requesting networked device as unicast packets. The requesting devices are requesting unicast but multicast is used instead, thereby having the advantage of saving bandwidth. In Diwan the if unicast is requested such as by the agent unicast is used to transmit the data back, as in col. 6, lines 40-43 where the Examiner directs the Applicants. Also, in Diwan the subscribers are requesting multicast by subscribing to a multicast group and multicast is used to get the information to the subscribers. Nowhere in Diwan does a networked device request unicast and get multicast packet transmitting the requested data. The claims need to be considered as a whole, as required by the Statute and may not be considered in a dissected fashion.

Nowhere does Diwan teach, anticipate, or suggest, delivering requested portions of content to a requesting networked device as ordinary unicast packets using a multicast packet, as recited for presently claimed invention. Assuming arguendo that Diwan teaches at col. 6, lines 40-43, that unicast packets can be sent to the agent, the agent requests unicast and gets the information transmitted back as unicast.

Therefore, Diwan does not teach, anticipate, or suggest, "a first request corresponding to the first networked device, the first request requesting a first portion of the content, the first portion of content to be delivered to the first networked device as an ordinary unicast packet, and a second request corresponding to the second networked device, the second request requesting a second portion of content, the second portion of content to be delivered to the second networked device as an ordinary unicast packet, the second portion of content requested including an overlapping portion of content that overlaps the first portion of content requested by the first request" and "creating a combined response, the combined response destined for reception by the first networked device and by the second networked device, the combined response including the overlapping portion of content requested by the first and second networked devices, wherein the combined response comprises a multicast packet", as recited for independent Claim 32 and similarly for independent Claims 1, 11, and 21. Accordingly, Applicants believe that the rejection of Claims 1, 11, 21, and 32, has been overcome and respectfully request this rejection be withdrawn.

Claims 2-10, 12-20, 22-31, and 33-37 depend from Claims 1, 11, 21, and 32, respectively and since dependent claims recite all of the limitations of the independent claim, it is believed that, therefore, Claims 2-10, 12-20, 22-31, and 33-37 are distinguishable over Diwan, as has been already discussed above with respect to Claims 1, 11, 21, and 32. However additional arguments are given below with respect to Claims 3-5, 13-15, 23-25, 31, and 37.

With respect to Claims 3-4, 13-14, and 23-24 the Office Action states on page 5 that Diwan "discloses providing the combined response to a plurality of subscribers through a network interface, using Internet Protocol (IP) multicast routing techniques" and further states that TCP/IP is a suite of protocols that allow TCP packets to be routed to a plurality of network devices across the Internet.

However, the claims must be read as a whole and the dependent claims must be read in light of their independent claims. Claims 3, 13, and 23 recite "the combined response comprises at least one TCP packet destined for reception by the first and second networked devices" and Claims 4, 14, and 24 recite "the least one TCP packet utilizes multicast transmission for delivering the at least one packet to the first and second networked devices". **Nowhere** does Diwan teach, anticipate, or suggest a combined response comprising at least one TCP packet utilizing multicast. IP routing techniques **do not** include a TCP packet as asserted by the Examiner. Conventional IP multicasting techniques, as taught by Diwan, include a multicast packet with a single multicast group address. Therefore, Claims 3-4, 13-14, and 23-24, are distinguishable over Diwan for this reason as well.

With respect to Claims 5, 15, 25, 31, and 37 the Office Action states Diwan does not specifically disclose Small Group Multicast, but that it would have been obvious to one of

ordinary skill in the art to use Small Group Multicast without pointing to a specific reference<sup>1</sup>. The Applicants respectfully believe that Small Group Multicast is **not** obvious to one of ordinary skill in the art. Small Group Multicast is a new and novel multicasting protocol that comprises a multicast packet including unicast addresses unlike the conventional multicast packets which only include a single multicast group address. See for example Application No. 09/240,546, entitled "Reliable Multicast For Small Groups" filed on January 29, 1999 and now issued as U.S. Patent No. 6,415,312; U.S. Patent Application No. 09/240,549, entitled "Multicast Support For Small Groups", filed on January 29, 1999 and now issued as U.S. Patent No. 6,502,140; U.S. Patent Application No. 09/329,101, entitled "System For Multicast Communications In Packet Switched Networks", filed on June 9, 1999 and now issued as U.S. Patent No. 6,625,773; and U.S. Patent Application No. 09/774,505, entitled "Method And System For Efficiently Delivering Content To Multiple Requesters", filed on January 31, 2001, which have been incorporated by reference.

Accordingly, in view of the amendments and remarks above, since Diwan does not teach, anticipate, or suggest, the presently claimed invention as recited for Claims 1-37, Applicants believe that the rejection of Claims 1-37 under 35 U.S.C. 103(a) has been overcome. The Examiner should withdraw the rejection of these claims.

### **Conclusion**

The foregoing is submitted as full and complete response to the Official Action mailed March 28, 2005, and it is submitted that Claims 1-37 are in condition for allowance. Reconsideration of the rejection is requested. Allowance of Claims 1-37 is earnestly solicited.

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<sup>1</sup> If the Examiner's statements are based on facts within the personal knowledge of the Examiner, the Applicant respectfully requests that the Examiner support these assertions by filing an affidavit as is allowed under MPEP §707 citing 37 CFR 1.104(d)(2).



No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicants have argued herein that such amendment was made to distinguish over a particular reference or combination of references.

Applicants acknowledge the continuing duty of candor and good faith to disclose information known to be material to the examination of this application. In accordance with 37 CFR § 1.56, all such information is dutifully made of record. The foreseeable equivalents of any territory surrendered by amendment are limited to the territory taught by the information of record. No other territory afforded by the doctrine of equivalents is knowingly surrendered and everything else is unforeseeable at the time of this amendment by the Applicants and the attorneys.

**If the Examiner believes that there are any informalities that can be corrected by Examiner's amendment, or that in any way it would help expedite the prosecution of the patent application, a telephone call to the undersigned at (561) 989-9811 is respectfully solicited.**

The Commissioner is hereby authorized to charge any fees that may be required or credit any overpayment to Deposit Account **50-0510**.

In view of the preceding discussion, it is submitted that the claims are in condition for allowance. Reconsideration and re-examination, and allowance of the claims, is requested.

Respectfully submitted,

Date: May 31, 2005

By: \_\_\_\_\_



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